

REMARKS

By this amendment, claims 34, 35, 37-41, 46, 47, 49, 53-56, and 58 are amended, claims 42, 45, 48, 51, and 52 are cancelled, and no claims are added. Claims 1-33 were previously cancelled. Accordingly, claims 34-41, 43, 44, 46, 47, 49, 50, and 53-58 are currently pending in the application.

Allowable Subject Matter

In the Final Office Action mailed October 26, 2004, claims 35 and 36 were allowed, and claims 49, 50, 56, and 57 were objected to as being dependent upon a rejected base claim, but were deemed to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. By this amendment, claim 35 is amended to correct a minor typographical error. In addition, by this amendment, claims 49 and 56 (from which claims 50 and 57 depend, respectively) are amended into independent form, including all of the limitations of their respective base claims. Accordingly, Applicant believes that claims 49, 50, 56, and 57 are now allowable, and respectfully requests that the objection to these claims be reconsidered and withdrawn.

Previous Rejections Under 35 U.S.C. 103(a)

Rejection of Claims 34, 37-43, 45-48, 51-55, and 58:

In the Final Office Action mailed October 26, 2004 and again in the Advisory Action mailed January 12, 2005, claims 34, 37-43, 45-48, 51-55, and 58 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,790,536 (Mahany et al.) in view of U.S. Patent No. 6,275,166 (del Castillo et al.). Applicant has amended claims 34, 47, and 55, from which the remaining, previously rejected claims depend. In addition, Applicant has cancelled claims 42, 45, 48, 51, and 52, and therefore the rejection is moot with respect to those claims.

Based on the amendments and the below remarks, Applicant believes that neither Mahany et al., del Castillo et al., nor their combination teach or motivate the features of amended claims 34, 47, and 55. Accordingly, Applicant believes that the previous rejection of claims 34, 37-43, 45-48, 51-55, and 58 should not be repeated.

Mahany et al. disclose a hierarchical communication system (Abstract, Figure 1c). The communication system includes a host computer 55 connected to access points 56, 57, 58, 59, which together provide an infrastructure for a premises LAN (col. 11, lines 39-44, Figure 1c). The access points may be hardwired together or accessible to each other and the host computer via wireless links (col. 11, lines 45-49). The access points communicate with mobile computing devices 61, 62, 63, 64, 65, 66 via wireless links (col. 11, lines 50-51). The mobile computing devices, in turn, communicate with peripheral devices via other wireless links to form peripheral LANs (col. 12, lines 8-9). The communication protocol for the premises LAN using a basic access interval 200 (Figure 2) structure, in which multiple time division multiple access (TDMA) slots may be positioned at various places within the access interval (col. 12, line 64 through col. 14, line 31, Figures 21-24). Messages destined for the devices may be

buffered at control points, and delivered during appropriate points in an access interval according to a request/response access protocol (col. 17, line 28 through col. 18, line 46).

Power managed devices may employ sleep algorithms synchronized to sleep for multiple access intervals, and to activate to receive various messages (e.g., SYNC, HELLO and pending messages) (col. 31, lines 8-12; col. 35, lines 45-49). Computing devices may enter the network by obtaining operating parameters and acquiring access (col. 37, lines 38-60). The system may communicate with devices using frequency hopping or single frequency communications (col. 40, line 61 through col. 41, line 4). A specific embodiment of a hierarchical communication system deployed in a warehouse environment also is disclosed (col. 43, line 19 through col. 46, line 16, Figures 28a, 28b).

Del Castillo et al. disclose an appliance management system 10 for managing a distributed array of appliances, where the system includes a headend control station (HCS) 14 and a distributed array of appliance management stations (AMS) 12, which communicate with each other via wireless, satellite communications (col. 3, line 64 through col. 4, line 7; Figure 1). Some of the AMSs 12 may function as relay units (col. 4, lines 62-63).

Applicant's amended claim 34 includes at least the following features:

“. . . a first-tier base station communicatively coupled to the host through the wired local area network, wherein the first-tier base station is adapted to communicate with the host using a local area network communication protocol and to communicate with a second-tier base station using a first communication protocol;

a first second-tier base station communicatively coupled to the first-tier base station through a wired link that is distinct from the local area network, wherein the first second-tier base station and the first-tier base station communicate using the first communications protocol; and

a plurality of additional second-tier base stations wirelessly coupled in series to the first second-tier base station, wherein the plurality of additional second-tier base stations are intermediate the first second-tier base station and the plurality of remote units, and wherein the first second-tier base station is capable of communicating with a second-tier base station of the plurality of second-tier base stations without an intervening first-tier base station using a different communications protocol from the first communications protocol . . .”

Amended claims 47 and 55 include similar features, as do the claims that depend from independent claims 34, 47, and 55.

Neither Mahany et al., del Castillo et al., nor their combination teach or motivate the features of amended claims 34, 47, and 55 or the claims that depend therefrom. Among other claimed elements and element combinations, neither Mahany et al., del Castillo et al. nor their combination disclose “a first second-tier base station communicatively coupled to the first-tier base station through a wired link that is distinct from the local area network” or “a plurality of additional second-tier base stations wirelessly coupled in series to the first second-tier base station.” Accordingly, Applicant believes that claims 34, 37-41, 43, 46, 47, 53-55, and 58 are allowable over Mahany et al. and del Castillo et al.

Rejection of Claim 44:

In the Final Office Action mailed October 26, 2004 and again in the Advisory Action mailed January 12, 2005, claim 44 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany et al. in view of del Castillo et al. and further in view of U.S. Patent No. 5,673,252 (Johnson et al.). Applicant has amended claim 34 from which claim 44 depends, and the remarks regarding the distinctions between claim 34 and that which is disclosed by Mahany et al. in view of del Castillo et al. have been described in detail above. Johnson et al. does not make up for the deficiencies in Mahany et al. and del Castillo et al. Accordingly, Applicant believes that neither Mahany et al., del Castillo et al., Johnson et al. nor their combination teach or motivate the features of claim 44. Accordingly, Applicant believes that the previous rejection of claim 44 should not be repeated.

Support for Amendments

Amendments to the specification are made to correct inadvertent typographical errors. Support for the amendments to claims 34, 47, and 55 may be found in the originally-filed application at least at page 6, line 1 through page 7, line 6; page 11, line 6 through page 12, line 19; and Figures 1 and 4. Amendments to claims 37-41, 46, 53, 54, and 58 are made to ensure proper antecedent basis with their respective, amended base claims. No new matter is introduced as a result of these amendments.

Conclusion

Based on the amendments and the above remarks, Applicant believes that claims 34-41, 43, 44, 46, 47, 49, 50, and 53-58 are in a condition for allowance. If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this Preliminary Amendment and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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By: /SHERRY W. SCHUMM/
Sherry W. Schumm
Reg. No. 39,422
(480) 385-5060